

WHAT IS CLAIMED IS:

1. A storage router for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices, comprising:

5 a buffer providing memory work space for the storage router;

a Fibre Channel controller operable to connect to and interface with a Fibre Channel transport medium;

10 a SCSI controller operable to connect to and interface with a SCSI bus transport medium; and

a supervisor unit coupled to the Fibre Channel controller, the SCSI controller and the buffer, the supervisor unit operable:

15 to maintain a configuration for SCSI storage devices connected to the SCSI bus transport medium that maps between Fibre Channel devices and SCSI storage devices and that implements access controls for storage space on the SCSI storage devices; and

20 to process data in the buffer to interface between the Fibre Channel controller and the SCSI controller to allow access from Fibre Channel initiator devices to SCSI storage devices using native low level, block protocol in accordance with the configuration.

2. The storage router of Claim 1, wherein the configuration maintained by the supervisor unit includes an allocation of subsets of storage space to associated Fibre Channel devices, wherein each subset is only
5 accessible by the associated Fibre Channel device.

3. The storage router of Claim 2, wherein the Fibre Channel devices comprise workstations.

10 4. The storage router of Claim 2, wherein the SCSI storage devices comprise hard disk drives.

5. The storage router of Claim 1, wherein the Fibre Channel controller comprises:

15 a Fibre Channel (FC) protocol unit operable to connect to the Fibre Channel transport medium;
a first-in-first-out queue coupled to the Fibre Channel protocol unit; and
a direct memory access (DMA) interface coupled to
20 the first-in-first-out queue and to the buffer.

6. The storage router of Claim 1, wherein the SCSI controller comprises:

25 a SCSI protocol unit operable to connect to the SCSI bus transport medium;
an internal buffer coupled to the SCSI protocol unit; and
a direct memory access (DMA) interface coupled to

the internal buffer and to the buffer of the storage router.

7. A storage network, comprising:
- 5 a Fibre Channel transport medium;
a SCSI bus transport medium;
a plurality of workstations connected to the Fibre Channel transport medium;
a plurality of SCSI storage devices connected to the
10 SCSI bus transport medium; and
a storage router interfacing between the Fibre Channel transport medium and the SCSI bus transport medium, the storage router providing virtual local storage on the SCSI storage devices to the workstations
15 and operable:
to map between the workstations and the SCSI storage devices;
to implement access controls for storage space on the SCSI storage devices; and
20 to allow access from the workstations to the SCSI storage devices using native low level, block protocol in accordance with the mapping and access controls.

- 25 8. The storage network of Claim 7, wherein the access controls include an allocation of subsets of storage space to associated workstations, wherein each subset is only accessible by the associated workstation.

9. The storage network of Claim 7, wherein the SCSI storage devices comprise hard disk drives.

5 10. The storage network of Claim 7, wherein the storage router comprises:

 a buffer providing memory work space for the storage router;

 a Fibre Channel controller operable to connect to
10 and interface with a Fibre Channel transport medium, the Fibre Channel controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer;

 a SCSI controller operable to connect to and
15 interface with a SCSI bus transport medium, the SCSI controller further operable to pull outgoing data from the buffer and to place incoming data into the buffer; and

 a supervisor unit coupled to the Fibre Channel
20 controller, the SCSI controller and the buffer, the supervisor unit operable:

 to maintain a configuration for the SCSI
storage devices that maps between Fibre Channel devices and SCSI storage devices and that implements the access
25 controls for storage space on the SCSI storage devices; and

 to process data in the buffer to interface between the Fibre Channel controller and the SCSI

controller to allow access from workstations to SCSI storage devices in accordance with the configuration.

11. A method for providing virtual local storage on remote SCSI storage devices to Fibre Channel devices,
5 comprising:

interfacing with a Fibre Channel transport medium;

interfacing with a SCSI bus transport medium;

maintaining a configuration for SCSI storage devices
10 connected to the SCSI bus transport medium that maps between Fibre Channel devices and the SCSI storage devices and that implements access controls for storage space on the SCSI storage devices; and

allowing access from Fibre Channel initiator devices
15 to SCSI storage devices using native low level, block protocol in accordance with the configuration.

12. The method of Claim 11, wherein maintaining the configuration includes allocating subsets of storage
20 space to associated Fibre Channel devices, wherein each subset is only accessible by the associated Fibre Channel device.

13. The method of Claim 12, wherein the Fibre
25 Channel devices comprise workstations.

14. The method of Claim 12, wherein the SCSI storage devices comprise hard disk drives.